Technically Speaking XIII

Training in Spring Technology

This column has covered a variety of technical aspects of spring technology In the last few years. The subjects for each column have been selected somewhat at random, but all have resulted from IST's problem solving service or from our explanations for why springs behaved in a particular way.

Inevitably, the column has to be general in nature, and any specific results given to IST members are rendered anonymous before launching the subject into the public domain. The last column started to bring together aspects of spring technology by explaining how the fatigue life of end hooks in extension springs can be improved and how the method of improvement can be incorporated into a computer aided design (CAD) program.

Spring training course in China

However, in IST's experience, competent use of CAD programs is not enough to make a spring engineer. Understanding the formulae behind the CAD program enables intelligent use of the stress calculations and the performance predictions in such programs; this is IST's approach to teaching spring design.

To obtain a comprehensive knowledge of spring technology, study of subjects such as "Material Selection", "Optimising spring manufacturing processes" and "Failure and Prevention" are also beneficial. Courses on all of these subjects are available.

For instance, spring material suppliers are most interested in courses in material selection and failure analysis because the first (and often wrong) instinct of springmakers is to blame their raw material when problems arise. Spring manufacturers want to know how best to optimise their processes at minimum cost and to be able to validate springs designs efficiently. End users, who are usually responsible for spring design, want to know how to design springs efficiently and at lowest cost or lowest weight.

The boldest and bravest of IST's customers commission courses for the whole supply chain, so that everyone receives the best independent advice at the same time. Courses may be tailored to the needs of the automotive, aerospace, medical or other industries, describing the materials of most importance in that industry and country. Are there important differences between industries and countries? Attend a course and find out!

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Readers are encouraged to contact him with comments about this technically speaking column, and with subjects that they would like to be addressed in future.
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